

10/561510

IAP20 Rec'd PCT/PTO 20 DEC 2005

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Andreas Herman HOGT et al.

Attn: PCT Branch

Application No. New U.S. National Stage of PCT/EP04/007300

Filed: December 20, 2005

Docket No.: 126349

For: CLEANING OF FILTRATION MEMBRANES WITH PEROXIDES

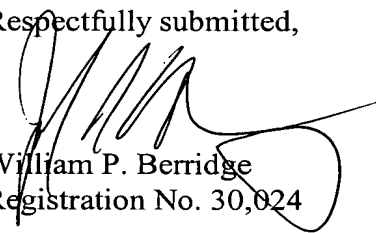
**SUBMISSION OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto is a submission of the annexes to the International Preliminary Report on Patentability (Form PCT/IPEA/409). The attached material is added to page 4.

Respectfully submitted,


William P. Berridge
Registration No. 30,024

Joel S. Armstrong
Registration No. 36,430

WPB:JSA/cqc

Date: December 20, 2005

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

| |
|--|
| <p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p> |
|--|

Printed: 18/01/2005

DESCPAMD

10/561510

04740638

IAP20 Rec'd PCT/PTO 20 DEC 2005



Intellectual Property

Page 4 of 4

A

EP 1 172 335 pertains to a process for cleaning candle filters and membrane installations in industrial water purification plants using hydrogen peroxide. In this process, a solid catalyst is placed immediately in front of the candle filter or membrane element and the hydrogen peroxide is added to the water to be cleaned.

EPO - DG 1

29. 11. 2004

(46)

29/11/2004

(46)

< insert A >

US 6,325,938 also relates to a process wherein the separating membranes are cleaned during use. Here, a special solid-liquid separating membrane assembly is applied comprising at least one membrane module unit and a gas diffuser disposed below the membrane modules. Said gas diffuser generates bubbles, which upon reaching the surfaces of the membrane modules will scrub them, thus preventing solid matter from being deposited on and clogging the surfaces of the membranes. For further cleaning of the membrane surfaces, the membrane modules may be brought into contact with a cleaning solution comprising a detergent containing percarbonate and a bivalent iron salt. For this purpose, an immersion system or a liquid passing system is preferably used, in which case the immersion system involves placing the inner and outer portions of the separating membranes completely under the surface of said cleaning solution, and the liquid passing system involves passing said cleaning solution through the separating membranes in the same manner as in a regular separation operation. However, a process for cleaning a filtration membrane according to the present invention, wherein one or more water-soluble peroxide compounds are dosed to the influx, is not disclosed.

The term "peroxide compounds" as used throughout the specification is meant to denote both inorganic and organic peroxides. Peroxide compounds suitable for use in the process for cleaning filtration membranes according to the present invention include any conventional inorganic or organic peroxide compound which is sufficiently water-soluble. By the term "water-soluble" is meant that the peroxide compounds have a solubility in water of at least 0.01 ppm, but preferably of at least 0.1 ppm, more preferably of at least 1 ppm, and most preferably of at least 5 ppm.

When the peroxide compound, which is not essentially hydrogen peroxide, is dosed to the aqueous influx, the contaminants present, preferably organic compounds and/or biomass contaminations, are oxidised or decomposed due to reaction with the peroxide compound or with reactive products produced by the peroxide compound which are present in the influx, so that clogging of the